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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,156	02/26/2002	Mahito Yoshioka	03500.016236	3428

5514 7590 07/26/2002

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EXAMINER

GLEITZ, RYAN M

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 07/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/082,156	YOSHIOKA ET AL.
	Examiner	Art Unit
	Ryan Gleitz	2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-4 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 26 February 2002 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . 4) Interview Summary (PTO-413) Paper No(s). ____ .
 5) Notice of Informal Patent Application (PTO-152)
 6) Other:

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to because the fixing film (25), pressurizing roller (26), and unfixed toner image (t) in figures 2-5 are section hatched; however, the patterns do not match the materials disclosed in the specification according to the cross hatching guidelines, as shown in MPEP 608.02.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character 4a in figures 1 and 7 has been used to designate both cleaning blade and developing roller. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. (USPN 5,250,999) in view of Ohtsuka et al. (USPN 5,331,385).

Referring to claim 1, Kimura et al. disclose an image forming apparatus comprising: an image bearing member (2), a transfer member (10) for transferring an image to a recording material (Col. 3, ln. 44-48), fixing means (14) for fixing an image onto the recording material (Col. 3, ln. 48-58), heating member (31) and back-up roller (14b) for forming a nip with the heating member (Col. 2, ln. 14-22), a voltage applied to the transfer member when the recording material is a resin sheet is lower than a voltage applied when the recording material is paper (Col. 4, ln. 43-50).

However, Kimura et al. do not disclose a back-up roller (2) that has a conductive containing layer (26d). Ohtsuka et al. do disclose such a back-up roller (2) that has a conductive material containing layer (26d). Ohtsuka et al. teach that a conductive tube of 30-50 (microns) prevents the accumulation of the charge triboelectrically produced, and in addition the charge flows to the ground, through the bonding agent and the rubber, reducing the surface potential of the roller, by which the offset is effectively prevented (Col. 3, ln. 45-68; col. 4 ln. 1-5).

It would have been obvious to one with ordinary skill in the art at the time of the invention was made to include a conductive layer on the back-up roller of the image forming

apparatus disclosed by Kimura et al. since such a configuration is well known to reduce the occurrence of triboelectrification and image offset by allowing the electric charge to flow to the ground through the rubber roller as disclosed by Ohtsuka et al.

Referring to claim 2, Kimura et al. further disclose an image forming apparatus, wherein the voltage applied to the transfer member when the recording material is a resin sheet is 3% to 80% of the voltage applied when the recording material is paper. Kimura et al. disclose a set of printing modes in which the voltage applied to a resin sheet is 50% (in color mode) or 75% (in monochrome mode) that of plain paper (Col. 5, ln 1-24; col.6 ln. 19-24). Both of these fall within the claimed range of voltages.

Referring to claim 3, Kimura et al. teach the claimed invention but do not disclose an image forming apparatus, wherein the resistance value of the conductive material containing layer of the back-up roller is equal to or less than $10^{13} \Omega/\square$ in terms of surface resistance or equal to or less than $10^{11} \Omega\bullet\text{cm}$ in terms of volume resistance. Ohtsuka et al. do disclose such a back-up roller with a conductive layer of limited resistance. Ohtsuka et al. teach that triboelectric charge is produced on a back-up roller with volume resistance as high as $10^{14} \Omega\bullet\text{cm}$, under which static offset can not be prevented; however, Ohtsuka further teaches this accumulation of charge is avoided by using a thin conductive tube with a volume resistance preferably $10^7 \Omega\bullet\text{cm}$ (Col. 3, ln. 60-69).

It would have been obvious to one with ordinary skill in the art at the time of the invention was made to limit the volume resistance of the conductive layer on a back-up roller of the image forming apparatus disclosed by Kamura et al. since such a configuration is well known

to reduce the occurrence of triboelectrification and image offset by allowing the electric charge to flow to the ground through the rubber roller as disclosed by Ohtsuka et al..

Referring to claim 4, Kimura et al. teach the claimed invention but do not disclose an image forming apparatus, wherein the back-up roller has an elastic layer and a surface resin layer, and at least one of these two layers contain the conductive material. Ohtsuka et al. do disclose a back-up roller (2) with an elastic layer (13) and a surface resin layer (18), in which one of these two layers contain the conductive material (Col. 3, ln. 41-55). Ohtsuka et al. teach that triboelectric charge is reduced by including a conductive layer, which allows the charge a path to an electrical ground (Col. 4 ln. 1-5).

It would have been obvious to one with ordinary skill in the art at the time of the invention was made to include a surface resin layer and an elastic layer in the back-up roller of the image forming appratus disclosed by Kamura et al. since such a configuration is well known to reduce the occurrence of triboelectrification and image offset by allowing the electric charge to flow to the ground through the rubber roller as disclosed by Ohtsuka et al..

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsuji et al. (JP 62-090674) disclose a transfer device for color copying machine comprising an image bearing member, a transfer member, fixing means, and a voltage applied to said transfer member when the recording material is a resin sheet is lower than a voltage applied when the recording material is paper.

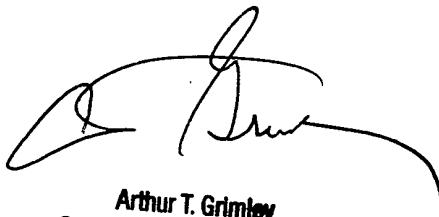
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is (703) 305-7388. The examiner can normally be reached on Monday-Friday between 8:00AM and 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

rmg

July 25, 2002



Arthur T. Grimley
Supervisory Patent Examiner
Technology Center 2800